LAKE: PUSHAW L (VLMP 19)

TOWN: OLD TOWN

COUNTY: PENOBSCOT

MIDAS: 80
TRUE BASIN: 1
SAMPLE STATION:

1

WHOLE LAKE INFORMATION TRUE BASIN CHARACTERISTICS

SURFACE AREA: 2045.0 ha. (5055.6 a.)

FLUSHING RATE: 1.96 flushes/yr.

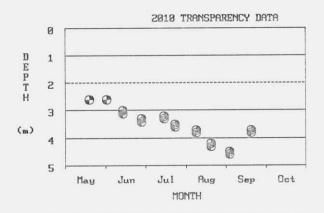
VOLUME: 65500000.0 cu. m. (53133 ac.-ft.)

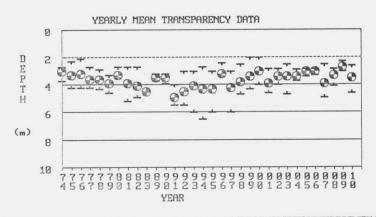
DIRECT DRAINAGE AREA: 194.88 sq. km. (75.24 sq. mi.)

WHOLE LAKE INFORMATION
MAX. DEPTH: 9 m. (28 ft.)
MEAN DEPTH: 3 m. (11 ft.)
DELORME ATLAS #: 33
USGS QUAD: PUSHAW LAKE
IFW REGION F: Penobscot (Enfield)
IFW FISH. MANAGMENT: Warmwater

PLEASE NOTE THE FOLLOWING: The SAMPLE STATION # refers to the location sampled. The term TRUE BASIN is used to define areas within a lake that are separated by shallow reefs or shoals and therefore function as separate lakes. There are approximately 50 lakes in the state that have more than 1 True Basin. True Basin Characteristics are now being included in the first section of these reports to enable users of the Phosphorous Loading Methodology to better evaluate the data. If there is no data for a particular True Basin, True Basin Characteristics must be obtained from the DEP. PUSHAW L has 1 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPHS:





Note: 2010 graphs may indicate multiple readings taken on a given day.

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

[* indicates that Secchi disk was visable at bottom of lake (or one reading used in calculation was visable)].

	MEAN	MEAN	MEAN	MEAN															
	COLOR	pН	ALK	COND.	TOTAL	PHOS.	MEANS	(ppb)	SECCH	I DISK	(m.)		CHLORO	PHYLL	A(ppb)	TROP	HIC ST	ATE IN	DICES
	(SPU)		(mg/l)	(us	EPI	SURF	BOT.	PRO.								EPI	PHOS		
YEAR				_/cm)	CORE	GRAB	GRAB	GRAB	MIN.	MEAN	MAX.	N_	MIN.	MEAN	MAX.	<u>C</u>	<u>G</u>	SEC	CHL
1974	60	7.00	17.0	40	-	15	-	-	2.7	3.0	3.7	5	2.6	3.6	4.8	-	-		45
1975	40	6.50	16.0	26	-	13	-	-	2.3	3.3	4.2	6	2.1	3.8	9.2	_	-	-	46
1976	7 20	-		-	13	-	-	-	2.1	3.2	4.2	6	1.8	3.6	5.6	-	-	-	44
1977	_		-	-	-	-	-	-	2.7	3.6	4.2	6	-	-	-	-	-	-	-
1978	-	_	_	-	-	-		-	2.9	3.6	4.3	2	-	. 7		-	-	-	-
1979	_	_	_	-	-	-	-	-	3.3	3.9	4.6	5	-	-	-	-	100	-	-
1980	80	6.90	20.0	55	22	-	-	-	2.7	3.3	3.5	4	5.0	5.0	5.0	-	-	-	-
1981	-	ap i	-	_	-	-	_	_	2.7	3.9	5.2	5	-	-	-	. 7	-	-	-
1982	- 100-100	-	-	-,	-	-	-	-	2.7	4.1	4.9	5	-	-	-	-	-	-	-
1983	50	7.10	13.0		10	-	-	-	4.5	4.5	4.5	1	3.6	3.6	3.6	_	-	-	-
1989	-		- '		-	-	-	-	3.2	3.5	3.7	6	-	-	-	-	-	-	-
1990	50	7.55	13.0	61	12	-	-	-	3.2	3.5	3.9	6	4.0	4.0	4.0	-	-	-	-
1991	-	-	-	_	-	-	_	-	4.0	4.9	5.5	6		-	-	-		-	-
1992	2012	-	-	-	-	-	-	-	3.0	4.5	5.5	6	-	-	-	-		-	-
1993	-	-	-	-	17	-	-	-	3.0	4.1*	6.0	6	-	-	-	_	20	-	_

LAKE: PUSHAW L (VLMP 19)
TOWN: OLD TOWN

COUNTY: PENOBSCOT

MIDAS: 80

*TRUE BASIN: 1

*SAMPLE STATION: 1

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

	MEAN	MEAN	MEAN	MEAN															
	COLOR		ALK	COND.	TOTAL	PHOS.	MEANS	(ppb)	SECCH	I DISK	(m.)	111	CHLORO	PHYLL	A(ppb)	TROP	HIC ST	TATE IN	DICES
	(SPU)	F	(mg/l)	(us	EPI	SURF	BOT.	PRO.								EPI	PHOS		
YEAR	()			/cm)	CORE	GRAB	GRAB	GRAB	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	<u>C</u>	<u>G</u>	SEC	CHL
1994		_	_	_	-	-	-	14	2.7	4.3	6.5	6	-	-	-		-	-	-
1995	2	_	_	-	_	_	-	-	3.0	4.3	6.0	6	-	-	-	_	-	-	-
1996	_	_	_	_	_	-	_	_	2.4	3.2	3.4	6	.=	-	-	-	-	-	-
1997	24	7.41	15.0	65	11	_	-	-	3.0	4.2*	6.0*	7	2.5	2.5	2.5	-	-	-	-
1998		-	_	-	_	_	-	-	2.5	3.8	4.7	6	-	-	-	-	-	-	-
1999	_	_	_	_	_	-	-	-	2.0	3.4	4.3	6	-	-	-	-	-		-
2000	_	_	_	_	_	_	-	-	2.0	3.0	4.0	6	-	-	_	-	-	-	-
2001	_	_	_	-	-	_	2-1	_	2.8	3.9	4.6	6	-	-	-	-	-	-	-
2002	40	-	17.0	76	15	-	-	_	2.8	3.4	4.0	3	4.9	4.9	4.9	-	-	-	_
2003	_	-	-	=	-	-	-	-	2.5	3.4	4.7	3	-	-	S=1	-	-	-	-
2004	_	-	-	-	-	-	-	-	2.9	3.4	3.7	4	-	-	-	-	-	-	-
2005		_	: I =	-	no 110	-	3-		2.8	3.0	3.4	3		-		-	-	-	-
2006	_	-		_	_	15	,-	-	2.8	3.0	3.3	3	-	=	-	-	-	-	-
2007	42	7.45	17.1	64	. 14	-	-	-	2.5	3.9	4.9	5	4.0	4.0	4.0	-	_	-	-
2008	-	-	-	_	-	16	-	-	2.8	3.3	4.1	4	-	-	-	-	-	_	-
2009	-	-	-	-	-	19	-	-	2.3	2.7	3.0	4		-	-	-	-	-	-
2010	-		-	_	-	17	-	-	2.6	3.5	4.6	5	-	-	-	-	-	-	-
SUMMARY:	48	6.99	16.0	55	14	16	-	14	2.0	3.6*	6.5	32	1.8	3.9	9.2	-	-	-	45

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

							S	AMPLE	DATE								
DEPTH	DEPTH 08/08/09		08/29	08/29/09		09/03/09		/09	08/08	/10	08/19	/10	09/03	/10	09/1	9/10	
m	°c	mqq	°C_	ppm	°C_	ppm	°C_	ppm	_°C_	mqq	°C_	ppm	_°C_	mqq	<u>°C</u>	_ppm	
0.0	23.3	7.6	25.6	7.2	21.9	8.6	16.8	9.4	24.6	8.9	24.1	8.8	26.2	9.0	17.9	10.3	
1.0	23.3	7.5	25.4	7.1	21.8	8.5	16.7	9.3	24.6	8.9	23.6	8.9	26.1	9.0	17.8	10.3	
2.0	23.3	7.5	25.1	7.0	20.9	8.5	16.7	9.3	24.6	8.9	23.3	8.9	25.5	9.0	17.5	10.3	
3.0	23.2	7.5	25.0	7.0	20.2	8.0	16.7	9.3	24.5	8.9	23.0	8.8	24.9	8.7	17.2	10.2	
4.0	23.2	7.5	24.6	5.9	20.0	7.9	16.6	9.2	24.4	8.9	22.9	8.7	23.3	8.3	17.1	10.2	
5.0	23.2	7.5	23.4	4.1	19.9	7.6	16.5	9.2	24.0	8.6	22.8	8.7	22.6	7.3	17.0	10.1	
6.0	23.2		22.7		19.7	7.4	16.5	9.1	23.5	8.4	22.7	8.1	22.3	7.0	17.0	10.0	
7.0		7.5	22.1				16.4		-	-	22.7	7.6	22.1	6.4	17.0	10.0	
8.0	_	_	_	_	_	_	_	-	-	-	-	-		_	-	-	

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WATER QUALITY SUMMARY

PUSHAW POND, OLD TOWN

MIDAS: 80, Sample Station # 1, (Deep Hole)

The Maine Department of Environmental Protection (ME-DEP) and the Volunteer Lake Monitoring Program (VLMP) have collaborated in the collection of lake data to evaluate water quality, track algal blooms, and determine water quality trends. This dataset does not include bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring data for Pushaw Pond have been collected since 1974. During this period, 10 years of basic chemical information was collected in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Pushaw Pond is considered average based on measures of SDT, total phosphorus (TP), and Chlorophyll-a (Chla). The potential for nuisance algal blooms on Pushaw Pond is low to moderate.

Water Quality Measures: Pushaw Pond is a colored lake (average color 48 SPU) with an average SDT of 3.6 m (11.8 ft). The range of water column TP for Pushaw Pond is 10 - 22 parts per billion (ppb) with an average of 14 ppb. Chla ranges from 1.8 - 9.2 ppb with an average of 3.9 ppb. Recent dissolved oxygen (DO) profiles show no DO depletion in deep areas of the lake. The potential for phosphorus to leave the bottom sediments and become available to algae in the water column (internal loading) is low.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the Internet at http://www.lakesofmaine.org/ and/or http://www.maine.gov/dep/blwq/lake.htm, or telephone the ME-DEP at 207-287-3901 or the VLMP at 207-783-7733.

Filename: 80 1push, Revised: 11/04, By: rjb Updated: 2/11, By: jp

LAKE: PUSHAW L (VLMP 19)

TOWN: OLD TOWN

COUNTY: PENOBSCOT

MIDAS: 80
TRUE BASIN: 1
SAMPLE STATION:

2

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 2046.0 ha. (5055.6 a.)

FLUSHING RATE: 1.96 flushes/yr.

VOLUME: 65500000.0 cu. m. (53133 ac.-ft.)

DIRECT DRAINAGE AREA: 194.88 sq. km. (75.24 sq. mi.)

WHOLE LAKE INFORMATION

MAX. DEFTH: 9 m. (28 ft.)

MEAN DEPTH: 3 m. (11 ft.)

DELORME ATLAS #: 33

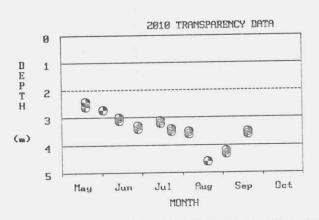
USGS QUAD: PUSHAW LAKE

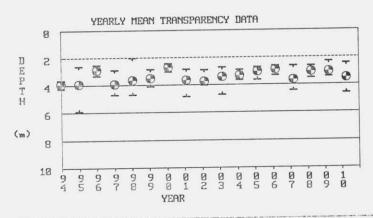
IFW REGION F: Penobscot (Enfield)

IFW FISH. MANAGMENT: Warmwater

PLEASE NOTE THE FOLLOWING: The SAMPLE STATION # refers to the location sampled. The term TRUE BASIN is used to define areas within a lake that are separated by shallow reefs or shoals and therefore function as separate lakes. There are approximately 50 lakes in the state that have more than 1 True Basin. True Basin Characteristics are now being included in the first section of these reports to enable users of the Phosphorous Loading Methodology to better evaluate the data. If there is no data for a particular True Basin, True Basin Characteristics must be obtained from the DEP. PUSHAW L has 1 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPHS:





Note: 2010 graphs may indicate multiple readings taken on a given day.

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

[* indicates that Secchi disk was visable at bottom of lake (or one reading used in calculation was visable)].

	MEAN	MEAN	MEAN	MEAN															
	COLOR	рН	ALK	COND.	TOTAL	PHOS.	MEANS	(dag)	SECCH	I DISK	(m.)		CHLOR	OPHYLL	A(ppb)	TROP	HIC ST	ATE IN	DICES
	(SPU)	4	(mg/l)	(us	EPI	SURF	BOT.	PRO.								EPI	PHOS		
	(550)		(mg, -)	/cm)	CORE	GRAB	GRAB	GRAB	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	<u>C</u>	G	SEC	CHL
YEAR				_/CIII)		97.0.20		15	3.6	3.9	4.2	2	_	_	_		-	1-	-
1994	IÇITE e	1 ()		-	15	76	_	7.0									7.000	_	_
1995	-	-	-	1	-	-	-	-	2.6	3.9	5.9	6	-	-	-	_			
1996	3	Take _	-	-	-	-	-	-	2.5	2.9	3.3	5	-	-	-	-	-		-
	104 104 4		pro o es		_	_	-	_	2.9	3.9	4.7	6	-	-	-	-	-	-	-
1997	-	_						2	2.0	3.6	4.7	6	_	-	-	_	-	-	-
1998	-	-		-		-	-	-								_	-	2	_
1999	-	-	-	_	-	-	-	-	2.8	3.5	4.1	5	-	-	-				
2000	-	-	-	-	-	-	-	-	2.4	2.7	3.0	5	-	_	-	-	-	700	-
2001	_ 17	3 (3)		" _	_	_	_	-	2.8	3.6	4.8	5	-	-	-	-	-	-	-
	1100						2	_	2.9	3.7	4.0	3	_	-	-	-	-	-	-
2002	- 1		Serie Ville	2 7	-	-	54				4.7	3			10	100		_	_
2003	-	_	-	a - 2	-	-	-	-	2.7	3.4		٥							
2004	-	, , , , , , , , , , , , , , , , , , ,	-	-		-	-	-	2.9	3.3	3.6	4	-	-	=	-	-	-	-
2005	-	(_		_	-	1 - 1	-	-	2.7	3.0	3.6	3	-	-		-	-	-	-
				_	_	22	_	-	2.6	2.9	3.3	3	-	_	-	-	-	-	-
2006	-	7 T.	n sa T		Ē., ji	22					4.4	5	3.5	3.5	3.5	-	_	-	-
2007	49	7.46	5 17.9	6	5 18	-	_	-	2.6	3.6			٥	, ,,,	2.5			1175	77-47
2008	_	-	-	-	-	18	-	-	2.6	3.0	3.5	4	-	-	-	-	-	-	_

LAKE: PUSHAW L (VLMP 19)
TOWN: OLD TOWN

COUNTY: PENOBSCOT

MIDAS: 80 *TRUE BASIN: 1

*SAMPLE STATION: 2

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

	MEAN	MEAN	MEAN	MEAN															
	COLOR	pН	ALK	COND.	TOTAL	PHOS.	MEANS	(dqq)	SECCH	I DISK	(m.)		CHLORO	DPHATT	A(ppb)	TROP	HIC ST	ATE IN	DICES
	(SPU)		(mg/l)	(us	EPI	SURF	BOT.	PRO.								EPI	PHOS		
YEAR				_/cm)	CORE	GRAB	GRAB	GRAB	MIN.	MEAN	MAX.	N_	MIN.	MEAN	MAX.	<u>C</u>	<u>G</u>	SEC	CHL
2009	-	-	-	-	-	18	-	-	2.3	3.0	3.4	4	-	-	-	-	-	-	-
2010	-		-	-	-	17	-	-	2.4	3.5	4.6	5	-	-	-	-	-	-	-
SUMMARY:	49	7.46	17.9	66	17	18	-	15	2.0	3.4	5.9	17	3.5	3.5	3.5	-	_	-	-

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

	SAMPLE DATE															
DEPTH	08/08/09		9 08/26/09		09/04/09		09/20/09		08/05	/10	08/19	/10	09/03	/10	09/19	/10
m	_°C_	ppm	°C_	ppm	_°C_	ppm	_°C_	ppm	_°C_	mqq	°C_	ppm	_°C_	ppm	_°C_	ppm
0.0	23.2	7.3	26.1	7.2	22.0	8.5	17.0	9.3	25.3	8.9	24.7	8.8	25.9	9.0	18.1	10.3
1.0	23.2	7.3	26.1	7.2	21.8	8.5	17.0	9.3	25.3	8.8	23.9	8.9	25.6	9.0	18.0	10.3
2.0	23.1	7.3	26.0	7.1	21.5	8.4	16.9	9.2	25.2	8.8	23.6	8.9	25.2	9.0	17.6	10.3
3.0	23.0	7.2	25.9	7.0	21.3	8.2	16.8	9.2	25.2	8.8	23.5	8.8	24.1	8.7	17.4	10.1
4.0	22.9	7.2	25.3	5.5	20.7	7.9	16.7	9.2	25.1	8.8	23.4	8.8	23.0	7.6	17.3	10.1
5.0	22.8	7.2	23.3	3.4	20.2	7.6	16.7	9.1	24.5	8.6	23.1	7.9	22.6	7.5	17.3	10.1
6.0	22.7	7.2	22.4	2.5	20.0	7.4	16.4	9.0	24.2	8.2	22.9	7.6	22.4	7.2	17.3	10.0
7.0	22.7	7.2	22.2	2.4	20.0	7.4	16.7	9.2	-	-	22.8	7.3	22.3	6.9	17.3	10.0

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WATER QUALITY SUMMARY

PUSHAW POND, OLD TOWN

MIDAS: 80, Sample Station # 2, (Northern)

The Maine Department of Environmental Protection (ME-DEP) and the Volunteer Lake Monitoring Program (VLMP) have collaborated in the collection of lake data to evaluate water quality, track algal blooms, and determine water quality trends. This dataset does not include bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring data for Pushaw Pond sample station 2 has been collected since 1994. During this period, only 2 year of basic chemical information was collected in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Pushaw Pond is considered average based on measures of SDT, total phosphorus (TP). The potential for nuisance algal blooms on Pushaw Pond is low.

Water Quality Measures: Pushaw Pond is a colored lake (average color 49 SPU) with an average SDT of 3.4 m (11.2 ft). The range of water column TP for Pushaw Pond is 15-18 parts per billion (ppb) with an average of 17 ppb. Chla levels have been measured at 3.5 ppb. Recent dissolved oxygen (DO) profiles show no DO depletion in deep areas of the lake. The potential for phosphorus to leave the bottom sediments and become available to algae in the water column (internal loading) is low.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the Internet at http://www.lakesofmaine.org/ and/or http://www.maine.gov/dep/blwq/lake.htm, or telephone the ME-DEP at 207-287-3901 or the VLMP at 207-783-7733.

Filename: push80 2, Revised: 11/04, by: rjb Updated 2/11, By: jp